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| E I DU PONT DE NEMOURS AND COMPANY<br>LEGAL PATENT RECORDS CENTER<br>BARLEY MILL PLAZA 25/1128<br>4417 LANCASTER PIKE<br>WILMINGTON, DE 19805 |             |                      | TSOY, ELENA         |                  |
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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

**MAILED**

JUL 28 2006

**GROUP 1700**

Application Number: 10/634,330

Filing Date: August 04, 2003

Appellant(s): KLOECKNER ET AL.

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Hilmar Fricke  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed July 17, 2006 appealing from the Office action mailed January 18, 2006.

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**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. Amendment of claims 2 and 3 filed on June 28, 2006 has been entered because the amendment places the claims in better form for consideration on appeal.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

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**(8) Evidence Relied Upon**

|           |                 |         |
|-----------|-----------------|---------|
| 5,412,000 | HELLMANN ET AL  | 5-1995  |
| 5,492,963 | OZAWA ET AL     | 2-1996  |
| 6,670,414 | SHIRAISHI ET AL | 12-2003 |
| 4,517,327 | HEAPS ET AL     | 5-1985  |
| 5,279,862 | CORCORAN ET AL  | 1-1994  |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 2-8, 10-15, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellmann et al (US 5,412,000) in view of Ozawa et al (US 5,492,963), further in view of Shiraishi et al (US 6,670,414).

Hellmann et al disclose a method for painting motor vehicles and motor vehicle parts having plastics surfaces (See column 3, lines 8-16), comprising applying a pigmented coating composition (See column 1, line 65) directly to the plastic substrate as a primer (See column 2, line 68; column 3, lines 9-11), and curing the pigmented paint layer thus obtained (See column 3, lines 17-25), wherein the coating composition comprises a) from about 1 to 5% by weight of one or more ethylene/vinyl acetate copolymers, b) from about 0.5 to 5% by weight of one or more chlorinated polyolefins with chlorine content of 10-25 wt % such as *commercially* available products (See column 2, lines 35-38), c) from about 0.01 to 5% by weight of one or more epoxy resins (claimed conventional binder), d) from about 85 to 98.49% by weight of one or more organic solvents, and optionally paint auxiliaries, pigments and/or fillers (See column 1, lines 63-68 to column 2, lines 1-20). The coating compositions are particularly suitable for use as primers for surfaces that are difficult to paint, particularly plastics surfaces and, preferably, polypropylene surfaces, of the type used in the construction and repair of motor vehicles particularly for motor vehicle parts having plastics surfaces (See column 3, lines 7-16). Hellmann et al teach that after

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drying/curing a primer coating layer, typical fillers and/or finishing paints, for example typical car repair paints, are applied over the to the dried/cured primer (See column 3, lines 21-28) by the two-coat or three-coat process (See column 3, lines 17-18). It is well known in the art that typical top finish layer is a clear layer, as required by claim.

Hellmann et al fail to teach that the coating composition further comprises chlorinated rubber (Claim 1) in an amount of 0.5-10 wt % (Claim 6).

Ozawa et al teach that chlorinated natural and synthetic rubbers have been found to provide excellent film-forming properties, adhesional affinity for vulcanizing elastomers, and environmental resistance (See column 1, lines 18-29). Chlorinated polyolefins having significantly high chlorine contents of 60-75 wt % (See column 2, lines 38-39) provide performance *equivalent* to or greater than the performance provided by the traditional chlorinated rubber materials utilized in adhesive compositions to provide effective adhesional affinity for vulcanizing rubber, and environmental resistance (See column 2, lines 3-16). In other words, Ozawa et al teach that chlorinated rubber or chlorinated polyolefins having significantly high chlorine contents of 60-75 wt % has adhesive properties to plastics that are superior to that of *commercial* chlorinated polyolefins having chlorine contents of only 10-25 wt % (i.e. much less than 60 wt %).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted at least a portion of *commercial* chlorinated polyolefins of Hellmann et al having low chlorine contents of only 10-25 wt % with *traditional* chlorinated rubber with the expectation of providing the desired improved adhesive properties since Ozawa et al teach that traditional chlorinated rubber has adhesive properties to plastics that are superior to that of *commercial* chlorinated polyolefins having low chlorine contents of 10-25 wt %. One of ordinary skill in the art would be motivated to use preferably **traditional** chlorinated rubbers than non-traditional highly chlorinated polyolefins to achieve improvement equivalent to non-traditional highly chlorinated polyolefins.

It is held that it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose....

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a combination of *commercial* chlorinated polyolefins of Hellmann et al with

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traditional chlorinated natural and synthetic rubbers since each of them are used for the same purpose.

Hellmann et al in view of Ozawa et al fail to teach that: (i) at least one binder selected from the group consisting of polyurethane, acrylated polyurethane, polyacrylate, polyester, acrylated polyester and alkyd resins and any combinations thereof has been added to the coating composition (Claims 2, 3); (ii) the coating composition is water-based composition (Claim 16).

As to (i), Shiraishi et al teach that alkyd resin, acrylic resin, polyester resin, polyurethane resin, epoxy resin, etc. may be added in amounts of 1 to 49 wt. % (solids) to a binder resin composition having a mixture of containing chlorinated polyolefin with the ethylene-vinyl acetate copolymer for application on polyolefinic substrates (See column 5, lines 39-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added alkyd resin, acrylic resin, polyester resin, polyurethane resin to a coating composition of Hellmann et al in view of Ozawa et al comprising chlorinated polyolefin with the ethylene-vinyl acetate copolymer and epoxy resin since Shiraishi et al teach that alkyd resin, acrylic resin, polyester resin, polyurethane resin, epoxy resin, etc. may be added in amounts of 1 to 49 wt. % (solids) to a binder resin composition having a mixture of containing chlorinated polyolefin with the ethylene-vinyl acetate copolymer for application on polyolefinic substrates.

As to concentration limitations, It is held that concentration limitations are obvious absent a showing of criticality. Akzo v. E.I. du Pont de Nemours 1 USPQ 2d 1704 (Fed. Cir. 1987). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant concentration parameters (including those of claimed invention) in Hellmann et al through routine experimentation in the absence of showing of criticality.

Since Applicants do not define “base coat” recited in the claims, the word “base coat” in the claims has been given its plain meaning. Note that “plain meaning” refers to the meaning given to the term by those of ordinary skill in the art. Those of ordinary skill in the art refer to a first coat layer as a “primer” even if the same composition is used for forming a primer layer, and first and a second base coat layers, as evidenced by numerous references which were provided to the Applicants by the Examiner with Advisory Action mailed on April 4, 2006 before filing the

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present appeal brief. **There is no art recognized chemical difference between primers and base coats:** a layer of any composition including a base coat composition with a suitable adhesion applied directly to the substrate serves as a primer. In the method of Hellmann et al in view of Ozawa et al and Shiraishi et al, a composition substantially identical to that of claimed invention is applied directly to a substrate, as required by claim language. Therefore, the coating composition of Hellmann et al in the absence of definition of the term “base coat” is a **base coat** composition as claimed, and, thus, the “pigmented primer” layer of Hellmann et al in view of Ozawa et al and Shiraishi et al is a layer formed from the claimed *base coat* composition, i.e. the formed layer is a pigmented **base coat primer**. Note that claimed pigmented base coat layer applied directly to a substrate is also a pigmented base coat primer because the base coat layer having a good adhesion to the substrate is used for *priming* the substrate for better adhesion of further clear coat layer.

It is held that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below); *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004).

Claims 3, 12-15, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi et al in view of Ozawa et al.

Shiraishi et al disclose a method for painting motor vehicles and motor vehicle parts having plastics surfaces (plastic substrates) (See column 1, lines 23-25), comprising applying a pigmented (See column 5, line 55) binder resin composition *directly* to the plastic substrate (See column 2, lines 66+), and curing the pigmented paint layer thus obtained (See column 3, lines 17-25), wherein the binder resin composition comprises ethylene/vinyl acetate copolymer and chlorinated polyolefin with chlorine content of 5-50 wt % in a weight ratio of from 90/10 to 10/90 (See column 5, lines 29-38), from about 1-49 wt of alkyd resin, acrylic resin, polyester resin, polyurethane resin, epoxy resin, etc. (claimed conventional binder), d) 50-10,000 parts per 100 parts of the resin composition of organic solvents (See column 5, lines 48-53), and optionally paint auxiliaries (See column 6, lines 10-11). The binder resin composition can be used as base paint

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such as a **base paint with metallic effect** (claimed effect-imparting base coat) with the addition of aluminum paste and a coloring pigment, UV absorber, etc., or **primer as it is** (i.e. without adding the above additives) (See column 5, lines 52-67) or as a **base paint with color-imparting pigments** with the addition of solid color pigments (claimed color-imparting base coat) (See column 6, lines 3-7).

Shiraishi et al fail to teach that the binder resin composition further comprises chlorinated rubber (Claim 3) in an amount of 0.5-10 wt % (Claim 14).

Ozawa et al are applied here for the same reasons as above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted at least a portion of *commercial* chlorinated polyolefins of Hellmann et al having low chlorine contents of only 10-25 wt % with *traditional* chlorinated rubber with the expectation of providing the desired improved adhesive properties since Ozawa et al teach that traditional chlorinated rubber has adhesive properties to plastics that are superior to that of *commercial* chlorinated polyolefins having low chlorine contents of 10-25 wt %. One of ordinary skill in the art would be motivated to use preferably **traditional** chlorinated rubbers than non-traditional highly chlorinated polyolefins to achieve improvement equivalent to non-traditional highly chlorinated polyolefins.

It is held that it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose....

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a combination of chlorinated polyolefins of Shiraishi et al with traditional chlorinated natural and synthetic rubbers of Ozawa et al since each of them are used for the same purpose.

As to concentration limitations, it is held that generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. It is also held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant concentration parameters (including those of claimed invention) in Shiraishi et al in view of Ozawa et al through routine experimentation in the absence of showing of criticality.

Claims 2, 4-8, 10, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi et al in view of Ozawa et al, further in view of Hellmann et al.

Shiraishi et al in view of Ozawa et al are applied here for the same reasons as above. Shiraishi et al in view of Ozawa et al fail to teach that the method further comprises applying a clear coat to the dried/cured base paint and curing the clear coat (Claim 2). Note that limitations of two base coat layers having and not having a component (B) are not addressed here because claim 2 recites in step (1) that a base coat layer consists of a color- and/or effect-imparting base coat, i.e. two base coat layers are optional.

Hellmann et al teach that after drying/curing a primer coating layer, a typical finishing paint may then be applied to the dried/cured layer (See column 3, lines 26-28). One of ordinary skill in the art would recognize that the typical finishing paint includes clear top coat.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have coated a base paint of Shiraishi et al in view of Ozawa et al with a typical finishing paint such as a clear top coat since Hellmann et al teach that after drying/curing a primer coating layer, a typical finishing paint may then be applied to the dried/cured layer.

Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hellmann et al in view of Ozawa et al in view of Shiraishi et al/Shiraishi et al in view of Ozawa et al/Shiraishi et al in view of Ozawa et al in view of Hellmann et al/, further in view of Heaps et al (US 4,517,327) and Corcoran et al (US 5,279,862).

Hellmann et al in view of Ozawa et al in view of Shiraishi et al/Shiraishi et al in view of Ozawa et al/Shiraishi et al in view of Ozawa et al in view of Hellmann et al/ are applied here for the same reasons as above. Hellmann et al in view of Ozawa et al in view of Shiraishi et al/Shiraishi et al in view of Ozawa et al/Shiraishi et al in view of Ozawa et al in view of Hellmann

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et al/ fail to teach that the colour-imparting coating composition is a water-based coating composition.

Heaps et al teach that because of greater environmental concerns today, efforts are being made to convert from solvent-based coatings to water-based coatings (See column 1, lines 15-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have converted solvent based coating composition to water-based coating composition in Hellmann et al in view of Ozawa et al in view of Shiraishi et al/Shiraishi et al in view of Ozawa et al/Shiraishi et al in view of Ozawa et al in view of Hellmann et al/ since Heaps et al teach that because of greater environmental concerns today, efforts are being made to convert from solvent-based coatings to water-based coatings.

Corcoran et al teach that in applying the clear coating composition to a vehicle such as an automobile or a truck for a repair or repainting, the basecoat which may be either a solvent based composition or a waterborne composition is first applied and then dried to at least remove solvent or water before the clear coat is applied (See column 4, lines 48-50).

One of ordinary skill in the art at would have reasonable expectation of success of using water based coating composition in Hellmann et al in view of Ozawa et al in view of Shiraishi et al/Shiraishi et al in view of Ozawa et al/Shiraishi et al in view of Ozawa et al in view of Hellmann et al/ instead of solvent based coating composition since Corcoran et al teach that in applying the clear coating composition to a vehicle such as an automobile or a truck for a repair or repainting, the basecoat which may be either a solvent based composition or a waterborne composition is first applied and then dried to at least remove solvent or water before the clear coat is applied.

#### **(10) Response to Argument**

Applicants' arguments filed with the appeal brief have been fully considered but they are not persuasive.

(A) Applicants argue that Hellmann is directed toward primers that are applied to the plastic substrate. Applicants' applied compositions are not primers but properly formulated base coats or mono-coats (top-coats).

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The Examiner respectfully disagrees with this argument. One of ordinary skill in the painting art knows that a base coat and a primer are used interchangeably, as evidenced by the following patents: US 5258460 to Faul et al uses an expression “**basecoat primers**” (See column 3, line 58); US 4572792 to Muller uses an expression a “... a primer (**basecoat**) of polysulfide...” (See column 3, line 68); and art does not recognize any chemical difference between base coats or primers, as evidenced by US 5859136 to Scopazzi et al teaching that the *same* coating composition *pigmented* with conventional pigments can be used as a monocoat or as basecoat or as a primer (See column 3, lines 39-42). (These documents were provided to the Applicants with the Advisory Action mailed on April 4, 2006). In the method of Hellmann et al in view of Ozawa et al and Shiraishi et al, a composition substantially identical to that of claimed invention is applied directly to a substrate, as required by claim language. Therefore, the coating composition of Hellmann et al in the absence of definition of the term “base coat” is a **base coat** composition as claimed, and, thus, the “pigmented primer” layer of Hellmann et al in view of Ozawa et al and Shiraishi et al is a layer formed from the claimed *base coat* composition, i.e. the formed layer is a pigmented base coat primer.

(B) Applicants state that in the Advisory Action, (page 3, par. 3 (A)), the Examiner in an effort to support the position that the terms “basecoat and primer” can be used interchangeably, cited Faul el al (U.S. Patent 5,258,460, col. 3, line 58). A fair reading of Faul et al. shows that the term “basecoat primers” is intended to mean “primers” which are formulated from amino-epoxy resins cathodically deposited on a substrate. Scopazzi el al (U.S. Patent 5,859, 136, col. 3, lines 39-42) actually supports the position that the terms are separate and distinct. "Generally, the novel coating composition is used as a clear coat but can be pigmented with conventional pigments and used as monocoat or as a basecoat or as a primer." Id. Scopazzi el al clearly points out that a monocoat, a basecoat and a primer are separate and distinct coating layers. Muller (U.S. Patent 4,572,792, col. 3, line 8) was also cited but the term “primer (**basecoat**)” referred to by Muller means a “primer”. Example 1 of Muller (col. 3, line 59 - col. 4, line 2) shows a primer of a polysulfide was applied and then a top coat of a polyurethane was applied to a test panel and does not support the proposition that primers and basecoats are interchangeable terms. The terms “basecoat and primer” cannot be used interchangeably. These are clear and distinct terms having an established meaning to those skilled in the coating art.

The argument is unconvincing. In contrast to Applicants argument, all cited references confirm the Examiner's statement that a base coat applied to a substrate forms a base coat primer layer. The fact that "basecoat primers" of Faul et al. are formulated from amino-epoxy resins and cathodically deposited on a substrate does not contradict the Examiner's statement that primers can be made from basecoats. Scopazzi el al also do not contradict the Examiner's statement: a primer layer of Scopazzi el al made from a base coat composition is a "basecoat primer". Example 1 of Muller also does not contradict the term "primer (basecoat)". Note that claimed pigmented base coat layer applied directly to a substrate is also a pigmented base coat primer because the base coat layer having a good adhesion to the substrate is used for *priming* the substrate for better adhesion of further clear coat layer.

(C) Applicants argue that one cannot equate primers, base coats and top coats. Each perform a completely different function in a multilayer coating. "Primer" is defined as "First complete coat of paint of a painting system applied to a surface. Such paints are designed to provide adequate adhesion to new surfaces and are formulated to meet the special requirements of the surface. The type of primer varies with the surface, its condition, and the total painting system to be used." (Paint/coatings Dictionary Published by Federation of Societies for Coatings Technology, 1978, p 344).

The argument is unconvincing because the "pigmented primer" layer of Hellmann et al in view of Ozawa et al and Shiraishi et al is a layer formed from the claimed *base coat* composition, i.e. the formed layer is a pigmented base coat primer.

(D) Applicants argue that the Examiner made a completely wrong interpretation of teachings of Ozawa et al (See NF Office Action rejection). Ozawa et al teach that adhesive compositions based on chlorinated polyolefins having a chlorine content of 60% provide a better performance than traditional chlorinated rubbers (see Ozawa, col. 2 lines 3 - 16). This means that chlorinated polyolefines have been substituted for chlorinated rubbers and not the other way around as suggested by the Examiner. The chlorinated polyolefins according to Ozawa et al show better metal - wetting capability than commercial chlorinated polyolefins having a chlorine content of less than 60%. Nothing at all is taught by Ozawa et al. of the fact that the use of chlorinated rubber leads to improved adhesion to plastics of coatings in comparison to the usual commercially available chlorinated polyolefins.

The Examiner disagrees. Firstly, the NF rejection cited that Ozawa et al teach that adhesive compositions based on chlorinated polyolefins having a chlorine content of 60% provide equivalent to (emphasis was added there too) or greater performance than *traditional* chlorinated rubbers. Secondly, the NF rejection cited that the chlorinated polyolefins according to Ozawa et al show adhesional affinity for rubber (See column 2, line 2) (not only better metal - wetting capability). One of ordinary skill in the art could use *either traditional* chlorinated rubbers or non-traditional highly chlorinated polyolefins instead or in addition to *commercial* chlorinated polyolefins to achieve adhesion improvement. However, one of ordinary skill in the art would be motivated to use preferably **traditional** chlorinated rubbers than non-traditional highly chlorinated polyolefins to achieve improvement equivalent to non-traditional highly chlorinated polyolefins.

(E) Applicants argue that none of the Shiraishi et al, Hellmann et al., and Ozawa et al. disclose all limitations of claimed invention: such as **two** base coat layers having and not having a component (B); Ozawa et al. teaches away from the use of the chlorinated rubber component. Therefore, if the teaching of Ozawa et al were combined with the other reference as suggested by the Examiner, the composition used in Applicants' process would not be formed since it would not have one of the necessary component, i.e., chlorinated rubber. Further, there cannot be an expectation of success since none of the references teach the second layer of coating applied over the first layer applied to the plastic substrate.

The argument is unconvincing. Limitations of claim 2 of **two** base coat layers having and not having a component (B) are not addressed here because claim 2 recites in step (1) that a base coat layer consists of a color- and/or effect-imparting base coat, i.e. **two** base coat layers are **optional**. And Ozawa et al. do not teach away from the use of the chlorinated rubber component (See above).

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

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July 20, 2006

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